

Remarks

The Applicants note the Examiner's statement that listing publications in the specification is not a proper Information Disclosure Statement. The Applicants referred in their specification to EP 0 607 688. The Applicants note, however, that an abstract of EP 0 607 688 was submitted in their Information Disclosure Statement dated August 11, 2006 and that PTO-1449 has been initialed by the Examiner. Thus, the sole publication referred to in the specification is of record and has otherwise been considered.

The drawings are objected to with respect to reference character "2" in Figs. 1a, 1b, 2, 6 and 7. Also, the drawings are objected to because they fail to show the drilling instrument as described in the specification. The Applicants accordingly submit a replacement set of drawings that addresses the above two issues raised in the objection. Withdrawal of both objections is respectfully requested.

Claim 17 is objected to with respect to the language "the electrodes." The Applicants note with appreciation the Examiner's helpful suggestion with respect to changing "the electrodes" to "the at least two electrodes." The Applicants have accordingly amended Claim 17 to refer to "the at least two electrodes."

Claims 17 – 29 stand rejected under 35 USC §112 as being indefinite. The Applicants note with appreciation the Examiner's helpful comments with respect to Claims 17 – 22. Those claims have been amended to specifically address those issues. Withdrawal of the rejection is respectfully requested.

The Applicants have further amended Claim 17 to remove selected portions of the subject matter of that claim. The Applicants have added new Claims 30 and 31 to claim that removed subject matter. Entry of new Claims 30 and 31 into the official file and consideration on the merits is respectfully requested.

Claims 17 – 20 and 23 – 29 stand rejected under 35 USC §102 as being anticipated by Lum. The Applicants respectfully submit, however, that Lum fails to explicitly or implicitly disclose all of the subject matter recited in that claim. Details are set forth below.

The Applicants provide a device which is adapted to output a signal representative of a variation in impedance between two electrodes located on a penetration instrument, which signal is not perturbed by variations in the depth of entry of the penetration instrument as disclosed in paragraphs [0008] and [0036] of the Applicants' published application.

To that end, the two electrodes have contact surfaces of selected dimension to be constant, i.e., invariable during entry of the penetration instrument. The contact surfaces remain relatively small compared to the dimensions of the hole formed by the penetration instrument so as to entirely penetrate the anatomical structure during entry of the instrument as disclosed in paragraphs [0019], [0020] and [0043] of the published application.

In sharp contrast, Lum discloses an instrument (110) comprising two electrodes (120, 122), one of which is formed of an electrically conductive coating (122) as disclosed in col. 3, lines 40 – 42 and lines 46 – 48. Therefore, Lum takes the opposite approach and discloses a contact surface of an electrode which increases as a function of the degree of penetration of the instrument. However, Lum does not disclose contact surfaces of the two electrodes between which the impedance is measured that are dimensioned to be constant as a function of the degree of penetration of the instrument in the anatomical structure.

The Applicants therefore respectfully submit that Lum fails to disclose portions of the Applicants' independent Claim 17 and, as a result, Lum is inapplicable under §102. Withdrawal of the rejection is respectfully requested.

Claims 21, 22 and 24 – 27 stand rejected under 35 USC §103 over the hypothetical combination of Pearlman with Lum. The Applicants respectfully submit that even if one skilled in the art were to make the hypothetical combination, the structure resulting from that combination would still be different from the device recited in those claims. Reasons are set forth below. The Applicants note with appreciation the Examiner's frank acknowledgement that Lum does not disclose having at least three electrodes. The Applicants agree. Thus, the rejection turns to Pearlman. However, Pearlman fails to cure the deficiencies set forth above with respect to Lum. In that regard, Pearlman discloses measurement of impedance between annular electrodes (156) located on a penetration instrument (154) and a reference electrode located on the body of the patient as disclosed in paragraphs 157, 159 and 178.

Therefore, Pearlman also takes the opposite approach and does not disclose two electrodes between which the impedance is measured located on the penetration instrument or contact surfaces of the two electrodes between which the impedance is measured that are dimensioned to be constant as a function of a degree of the penetration of the instrument in the anatomical structure.

Neither Lum nor Pearlman deal with the problem of perturbation of a signal representative of the impedance measured between two electrodes being located on the penetration instrument. They inherently, therefore, do not teach or suggest the solution. Further, neither of Lum and Pearlman implement contact surfaces of the two electrodes between which the impedance is measured that are dimensioned to be constant as a function of the degree of penetration of the instrument in the anatomical structure.

The Applicants respectfully submit that hypothetically combining Pearlman with Lum wherein the subject matter of Pearlman is imported into the structures of Lum would result in a structure that is different from that cited in Claims 21, 22 and 24 – 27. As a consequence, the

Applicants respectfully submit that the combination fails to provide disclosure, teachings or suggestions sufficient to maintain the rejection under §103. Withdrawal of the rejection is accordingly respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury
Reg. No. 31,750
Attorney for Applicants

TDC/sh
(215) 656-3381